

REMARKS

Claims 2-10 are pending. The Examiner has withdrawn Claims 6-10 from consideration for being drawn to a non-elected invention. By this Amendment, Claim 1 is canceled without prejudice or disclaimer and Claim 2 is amended. No new matter is presented.

Entry of Amendment is Proper

Entry of this Amendment is proper under 37 C.F.R. §1.116 since the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issues requiring further search and/or consideration on the part of the Examiner as Claim 2 is amended to more clearly recite the structure of the fuel cell by incorporating all of the features of the base claim, i.e., Claim 1, therein; (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The Amendment is necessary and was not earlier presented because it is made in response to objections raised in the Final Rejection. Entry of the Amendment is thus respectfully requested.

Claims Recite Patentable Subject Matter

Claims 1-5 are finally rejected under 35 U.S.C. §§ 102(e)/103(a) as being anticipated by, and/or alternatively unpatentable, over U.S. Patent No. 6,372,375 to Lawless. Applicants respectfully traverse the rejection.

Claim 2 recites a fuel cell comprising, among other features, gas diffusion electrodes including a plurality of layers of material that are stacked in the axial direction of a tubular casing.

The Office Action states the Applicants have not provided any evidence of an unobvious difference between the claimed fuel cell and the fuel cell of the prior art. Applicants respectfully disagree as the originally filed application is replete with such evidence.

For example, paragraph [0007] of the application notes that the recent expansion of applications for fuel cells has given rise to a need for more compact designs and that conventional manufacturing processes result in fuel cell structures that are not well suited for compactness. The application also indicates that variations in the thickness of diffusion electrodes manufactured using conventional methods are detrimental to efficient power generation. By providing a fuel cell, as recited by Claim 2, with a structure wherein gas diffusion electrodes include a plurality of layers of material stacked in an axial direction of the fuel cell's tubular casing provides a tubular fuel cell that is: compact and hence fills the ever expanding need for fuel cells having compact designs; easy to fabricate; has a high power generating efficiency; and allows for the shape of gas passages within the fuel cell to be selected as needed. See paragraphs [0010] through [0013]. Moreover, fuel cells having gas diffusion electrodes with a plurality of layers of material stacked in an axial direction of the fuel cell's tubular casing provides an assembly that may be formed in an extremely fine pattern so that a highly compact fuel cell can be formed. See paragraph [0015]. Additionally, as stated in paragraph [0046] of the application, because the gas diffusion layers are formed with

stacked layers, various components of the fuel cell can be formed in highly fine patterns so that a highly compact tubular fuel cell is achieved. Likewise, the dimensions of the various elements of the fuel cell are controlled in a highly accurate manner. Also, the geometric arrangement, e.g., cross sectional area, axial direction, etc., can be changed at will in intermediate parts of each gas passage. The Applicants even note that the tubular casing can also have a stacked structure, wherein the need to form tubular casings by an extrusion process is eliminated and the registration of the casing with the gas diffusion electrodes simplified.

Applicants respectfully submit that the Lawless fuel cell does not have a gas diffusion electrode that includes a plurality of layers of material that are stacked in the axial direction of the fuel cell's tubular casing. Applicants respectfully note the Office Action admits as much on page 4 of the Office Action.

Claim 2 recites a fuel cell comprising, among other features, gas diffusion electrodes including a plurality of layers of material that are stacked in the axial direction of a tubular casing. The fuel cell recited by Claim 2 provides differences and unexpected benefits compared to the Lawless fuel cell as the fuel cell of Claim 2 facilitates the ability to have fuel cells of compact size, a wide range of applications, easy to fabricate, and relatively high power generating efficiency. The Lawless fuel cell does not provide such benefits.

To qualify as prior art under 35 U.S.C. §102, a single reference must teach, i.e., identically describe, each feature of a rejected claim. As explained above, Lawless does not disclose or suggest each and every feature recited by pending Claim 2. Therefore, Lawless does not anticipate or render obvious the invention recited by

pending Claim 2. Accordingly, Applicants respectfully submit pending Claim 2 should be deemed allowable.

Claims 3-5 depend from Claim 2. It is respectfully submitted that these three (3) dependent claims should be deemed allowable for the same reasons as Claim 2, as well as for the additional subject matter recited therein.

Applicants respectfully request withdrawal of the rejection.

Formal Matter

Applicants respectfully note the Office Action asserts (on page 5) that the pending claims are product-by-process claims. Applicants respectfully disagree. The claims, as amended in the Response dated October 1, 2003 and currently pending, recite the structural features of the inventive fuel cell. Put simply, as is clear from above, pending claims 2-5 of the instant application clearly and unambiguously recite the structural features of the fuel cell and do not recite product-by-process claims. To assert otherwise is erroneous.

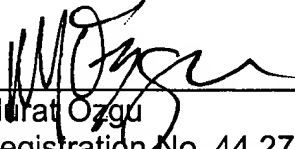
Conclusion

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejection, allowance of Claims 2-5, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 101213-00009.**

Respectfully submitted,



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